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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,249

11/14/2005

Sergei Levchik

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DILWORTH & BARRESE, LLP
333 EARLE OVINGTON BLVD.
SUITE 702
UNIONDALE, NY 11553

EXAMINER

ANTHONY, JOSEPH DAVID

ART UNIT

PAPER NUMBER

1714

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/533,249

Applicant(s)

LEVCHIK ET AL.

Examiner

Joseph D. Anthony

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/29/2005 as a Preliminary Amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Moy et al. WO 96/11977.

Moy et al. teach polycarbonate-containing compositions are flamed retarded with a mixture which comprises an arylene-bridged oligomeric polyphosphate ester and an effective amount of an alkylene-bridged diphosphate compound for increased flame retardancy efficacy and improved processing characteristics, see abstract and pages 1-2. Applicant's claims are deemed to be anticipated over Examples 3-5 and 8-10. By way of illustration, Example 4 teaches an admixture comprising: 50% by weight of resorcinol diphosphate and 50% by weight of neopentyl glycol bis(diphenylphosphate) incorporated into a polycarbonate containing composition. The said polycarbonate containing compositions are deemed to inherently meet

applicant's claimed method requirement of: "so that the hydrolytic stability of the resin composition under such conditions is retained to a greater degree as compared to a composition comprising the arylene-bridged oligomeric phosphate composition without the neopentyl glycol bis(diphenylphosphate)". Applicant's process limitation of "under humid conditions" is deemed to be easily met by the moisture in the air. Furthermore, polycarbonate panels, due to their great light transmission properties, are very well known to be used as paneling for greenhouses where they are exposed to very wet and humid conditions. When such polycarbonate panels are used as paneling for greenhouses, they also inherently meet applicant's claimed "under humid condition" limitation.

4. Claims 2 and 5-7 are rejected under 35 U.S.C. 103(a) as obvious over Moy et al. WO 96/11977 optionally in view of by Bright et al. WO 96/11996.

Moy et al. have both been described above. Moy et al. can be said to "differ" from applicant's claimed invention in that there is not a direct disclosure to the use of applicant's claimed arylene-bridged oligomeric phosphate ester species of wherein the bridging group is derived from bisphenol A.

Bright et al. teach alkylene-bridged diphosphate compounds can be used to modify, namely, reduce, the viscosity of fluid flame retardants (polybrominated aryl oxides, oligomeric phosphate esters, etc.) which are useful in flame retarding polyurethane and thermoplastic compositions, see abstract. Bright et al's Examples 2-13 teaches admixtures of arylene-bridged oligomeric phosphates with alkylene-bridged diphosphates. By way of illustration, Example 4 teaches an admixture comprising: 50% by weight of bisphenol A bis(diphenylphosphate) and

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50% by weight of neopentyl glycol bis(diphenylphosphate). The said mixtures are disclosed to be highly effective as a flame retardant for thermoplastic resins.

It would have been obvious to one having ordinary skill in the art to use bisphenol A as the bridging group since bisphenol A oligomeric phosphate esters are notoriously well known in the art to be used as effective flame retardant for thermoplastic compositions. Optionally, Moy et al. can be combined with the Bright et al.'s disclosure of using bisphenol A bis(diphenylphosphate) as an effective flame retardant in combination with an alkylene-bridged diphosphates, as overwhelming motivation to actually use bisphenol A bis(diphenylphosphate) in the compositions taught by Moy et al.. The said polycarbonate containing compositions are deemed to inherently meet applicant's claimed method requirement of: "so that the hydrolytic stability of the resin composition under such conditions is retained to a greater degree as compared to a composition comprising the arylene-bridged oligomeric phosphate composition without the neopentyl glycol bis(diphenylphosphate)". Applicant's process limitation of "under humid conditions" is deemed to be easily met by the moisture in the air. Furthermore, polycarbonate panels, due to their great light transmission properties, are very well known to be used as paneling for greenhouses where they are exposed to very wet and humid conditions. When such polycarbonate panels are used as paneling for greenhouses, they also inherently meet applicant's claimed "under humid condition" limitation.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being obvious over Bright et al. WO 96/11996 optional in view of Moy et al. WO 96/11977.

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Bright et al. and Moy et al. have been described above. Bright et al. differs from applicant's claimed invention only in that there is not a direct teaching to the use of said admixtures to flame retard a polycarbonate resin. It would have been obvious to one having ordinary skill in the art to use Bright et al.'s disclosure of using said admixtures to flame-retard thermoplastic resins, as motivation to choose polycarbonate resins since polycarbonates are thermoplastic resins and are well known in the art to be made flame-proof using organic phosphate flame retardants. Optionally, it would have been obvious to one having ordinary skill in the art to use the disclosure of Moy et al. (described above) as overwhelming motivation to chose polycarbonates as the thermoplastic resin to be flame retarded by Bright et al's mixtures, since Moy et al. directly teach said mixtures in a process of flame retarding polycarbonate resins. The said polycarbonate containing compositions are deemed to inherently meet applicant's claimed method requirement of: "so that the hydrolytic stability of the resin composition under such conditions is retained to a greater degree as compared to a composition comprising the arylene-bridged oligomeric phosphate composition without the neopentyl glycol bis(diphenylphosphate)". Applicant's process limitation of "under humid conditions" is deemed to be easily met by the moisture in the air. Furthermore, polycarbonate panels, due to their great light transmission properties, are very well known to be used in greenhouses where they are exposed to very wet and humid conditions. When such polycarbonate panels are used as paneling for greenhouses, they also inherently meet applicant's claimed "under humid condition" limitation.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/532,751. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method claims of the co-pending application are directly open to the further inclusion of a polycarbonate-containing resin as required in the claims of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Prior-Art Cited But Not Applied

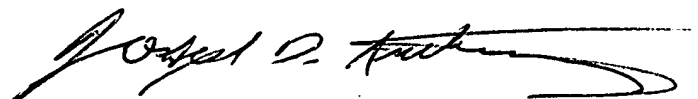
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8. Any prior-art reference which is cited on FORM PTO-892 but not applied, is cited only to show the general state of the prior-art at the time of applicant's invention.

Please note that U.S. Patent Number 6,855,275 is the functional U.S. equivalent of Bright et al. WO 96/11996, and is not being applied because the publication date of Bright et al. WO 96/11996 is good for a rejection under 35 U.S.C. 102(b) whereas U.S. Patent Number 6,855,275 is only good for a rejection under 35 U.S.C. 102(e).

Examiner Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Joseph D. Anthony whose telephone number is (571) 272-1117. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The centralized FAX machine number is (571) 273-8300. All other papers received by FAX will be treated as Official communications and cannot be immediately handled by the Examiner.



Joseph D. Anthony
Primary Patent Examiner
Art Unit 1714

3/22/07